

**IN THE CLAIMS:**

Please amend the claims as follows:

1. (Currently Amended) A connector for joining a first fiber optic cable end and a second fiber optic end of a fiber optic cable, said connector comprising:
  - a first connector end adapted to receive said first fiber optic cable end;
  - a second connector end adapted to receive said second fiber optic cable end;
  - a first plurality of termini disposed within said first connector end for terminating said first fiber optic cable end;
  - a second plurality of termini disposed within said second connector end for terminating said second fiber optic cable end, each termini of said first plurality of termini mating with each respective termini of said second plurality of termini;
  - a first alignment feature for properly aligning said first connector end with respect to said second connector end; and
  - a second alignment feature for properly rotationally aligning each termini of said first plurality of termini with each termini of said second plurality of termini.
2. (Original) The connector according to Claim 1 further comprising a nut disposed about said first connector end and being threadably attached to said second connector end.
3. (Original) The connector according to Claim 1 wherein said first alignment feature comprises:
  - a plurality of flanges formed on said first connector end to define a plurality of key openings; and
  - a plurality of key protrusions formed on said second connector end adapted to fit into said plurality of key openings to ensure proper alignment of said first and second connector ends.

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4. (Original) The connector according to Claim 3 wherein said plurality of key openings include a first key opening and a second key opening with said first and second key openings having different sizes and wherein said plurality of key protrusions having a first key protrusion and a second key protrusion corresponding in size to said first and second key openings, respectively.
5. (Original) The connector according to Claim 1 wherein said second alignment feature comprises a plurality of termini keys with each termini key being disposed on each of said plurality of termini, each said termini key fitting into a termini keyed hole formed in said first and second connector ends for receiving said termini.
6. (Original) The connector according to Claim 5 wherein said termini key is a pin inserted into a base part of each of said termini, said pin fitting into a keyed slot of said termini keyed hole.
7. (Original) The connector according to Claim 1 wherein said termini includes an angled tip surface for mating with a corresponding termini, said angled tip surface being properly aligned with respect to each other when joined as a result of said second alignment feature.
8. (Original) The connector according to Claim 1 wherein said connector is multi-channeled.
9. (Original) The connector according to Claim 1 wherein said connector is rated to withstand temperatures ranging from approximately 0°C to approximately 175°C.
10. (Original) The connector according to Claim 1 wherein said connector is rated to withstand ambient pressures of approximately one thousand (1,000) atmospheres.

11. (Original) The connector according to Claim 1 wherein said connector further comprises a back-shell welding feature to facilitate welding of each of said connector ends to protective tubing of said fiber optic cable.
12. (Original) The connector according to Claim 11 wherein said back-shell welding feature comprises:
- a welding opening formed within said connector end adapted to receive said protective tubing; and
  - a welding surface formed on one end of said connector end substantially adjacent said welding opening.
13. (New) A method of constructing an optical connector assembly, comprising:
- preparing a plurality of terminated fiber assemblies, each prepared by securing a fiber end assembly having an exposed fiber core to a terminus;
  - forming an alignment feature on each terminated fiber assembly to facilitate alignment of the exposed fiber core of the terminated fiber assembly with a fiber core of a corresponding mating terminated fiber assembly; and
  - inserting the prepared terminated fiber assemblies into an end of a connector assembly.
14. (New) The method of claim 13, wherein securing a fiber end assembly to a terminus comprises securing the fiber end assembly to the terminus via an adhesive.
15. (New) The method of claim 13, wherein securing a fiber end assembly to a terminus comprises collapsing a terminus structure onto the fiber end assembly.
16. (New) The method of claim 13, wherein preparing a plurality of terminated fiber assemblies comprises:
- preparing at least one pin terminated fiber assembly;
  - preparing at least one socket terminated fiber assembly; and

the method further comprises testing optical properties of a pin and socket terminal pair prior to inserting the prepared terminated fiber assemblies into an end of a connector assembly.

17. (New) A method of constructing an optical connector assembly, comprising:
  - preparing a plurality of terminated fiber assemblies, each prepared by securing a fiber end assembly having an exposed fiber core to a terminus;
  - forming an angled tip surface at an end of each terminated fiber assembly having the exposed fiber core;
  - forming an alignment feature on each terminated fiber assembly to facilitate alignment of the exposed fiber core of the terminated fiber assembly with a fiber core of a corresponding mating terminated fiber assembly; and
  - inserting the prepared terminated fiber assemblies into an end of a connector assembly.
18. (New) The method of claim 17, wherein forming the angled tip surface comprises polishing the end of the terminated fiber assembly with suitable pressure to form the angled tip surface having a desired angle.
19. (New) The method of claim 17, wherein securing a fiber end assembly to a terminus comprises collapsing a terminus structure onto the fiber end assembly.
20. (New) The method of claim 17, further comprising, prior to inserting the prepared terminated fiber assemblies into the end of a connector assembly:
  - testing the light carrying properties of one or more of the terminated fiber assemblies; and
  - storing results of the testing.